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Q&A: Wynn


Gary Wynn

Gary Wynn is chairman of the Engineering/Technology Education Department at Greenfield-Central High School. He was recently elected to the position of President-Elect of the International Technology Education Association, a Virginia-based professional organization for technology and engineering educators. The Daily Reporter asked him some questions about technology trends in education.

Reporter: What interested you initially about going into teaching?

Wynn: I grew up in southeastern Indiana and my extended family (grandparents, aunts, uncles, cousins, etc.) was made up of more than 11 educators. At family gatherings the conversations always seemed to involve discussions about educational issues, politics or IU basketball.

Being around all these educators had a big influence on my career selection. It was evident that they had chosen to become teachers because they wanted to make a "difference". I learned that the gratification they received from teaching was not based on any monetary reward, but rather the joy in giving students the tools needed to become the next generation of leaders.

Reporter: Why did you go into technology education in particular?

Wynn: When I received my bachelor's degree from Indiana State University I was certified to teach industrial arts. One of the reasons I chose this subject area was because I love to work and learn using my hands. Also, I got to make things using many different machines and tools. Another benefit was that it allowed me to apply the information I had learned in my high school math, science and language arts courses.

Today, unlike other subjects, technology is constantly changing or advancing. It has a dynamic nature as people create or invent to meet their wants and needs. It is a unique type of thinking that does not appear commonly in other subjects found in schools.

Reporter: What are the benefits for students of hands-on learning?

Wynn: A teacher once told me that "hands-on learning gives students a dose of reality". They also said that individuals learn in a variety of different ways. So hands-on learning allows students to not only see, but it helps address whatever happens on a real project.

I believe that learning is a function of experience and that a complete education is one that is sensory-rich, emotionally engaging, and allows students to connect to the world they live and work in. I have taught many students who struggle in their math and science courses, but once they come to our department and see math and science principles applied in technology classes, the light bulb seems to come on.

Reporter: Math and science have been a major focus for American educators in preparing students to compete in a fast-paced, globalized economy. How does technology education fit into this math and science emphasis?

Wynn: Math and science are made useful through applications that involve technology and engineering. Math and science alone don't allow for innovation or invention. We need to keep in mind that science is the study of the natural world. Technology is the study of what human beings do with that world. Therefore, the type of learning done in studying science is inquiry. The type of learning that is done in studying about technology is design. With these thoughts, math and science fit into technology.

Reporter: Describe some of the most innovative ways that your students use technology in the classroom.

Wynn: You nailed it when you used the word "innovative" because our subject area is about people being able to innovate. Human beings are never content with the world around them. They are constantly looking for ways to enhance something, make it better looking, to get it to run faster, or change some other function they do not like. How many times have you thought about improving the numerous objects in your life?

We are trying to teach students to take control of their own future by learning how to make change happen through designing, technological problem solving, troubleshooting, and adapting to change venues. I could answer your question by listing all of the neat new computer applications that we have, but they will be dated in a few months. However, teaching students the way to think through a problem and navigate in this technological world is really what technology education is all about.

Reporter: How do you see initiatives like Project Lead the Way preparing high school students for their future?

Wynn: Throughout the last 30 years, the G-CHS Technology Department staff has continued to set goals and examine how we can serve the needs of all students in our school. The E\TE staff - Mark Holzhausen, Trent Taylor and I - work as team to make sure that we follow all the state standards and guidelines to ensure that students are prepared to meet the challenges of a globalized economy. PLTW is a program that has allowed us to serve and challenge a select number of students who want to learn more about engineering and related careers. At the present time we are looking at the possibility of becoming a partner in Indiana's advanced manufacturing initiative. This initiative is designed to offer opportunities for students you want to enter the workforce upon graduation. You can learn more about it at www.in.gov/iedc/advancedmanufacturing.htm.

Reporter: Greenfield-Central has received numerous accolades for its technology and pre-engineering programs, including the program excellence award from ITEA. How have you gone about developing and expanding the G-C tech curriculum?

Wynn: This is an ongoing process that involves constant studying, watching "learning" research, sharper assessments, and seeking every possible opportunity to gain professional development. It does not happen quickly. Our biggest advantage has been being professionally involved in state and national association work where we can share and learn with other teachers inside and outside of our profession. As teachers, we have created a learning community - whether it is face-to-ace or electronic - that allows us to come across some of the best resources and ideas in the profession. We try to implement every one of them that fits into our department plans and goals. At the present time, we are looking at how the areas of science, technology, engineering, and mathematics (STEM) fit together in a school curriculum in a more meaningful learning environment.

Reporter: What's the most challenging part of teaching technology education? What's the most

rewarding part?

Wynn: *Most challenging:* Every student in our classes learn slightly differently and has different interests, fears, and concerns. This means that your ability as a teacher has to vary to connect with each learner. Some students' lives are in constant turmoil. School has become their safehaven. The many societal pressures placed on young people in this modern age can seem overwhelming at times. I learned a long time ago that if you get them to understand that you care and respect them, they will almost always do anything you ask them to do in the classroom.

Most rewarding: If you have ever watched as another person learns something new (for example, a teenager learning how to drive) and see the happiness and joy that goes along with the realization of the accomplishment, that's when you get the real reward in teaching!

Reporter: How have you seen technology education advance over the years? What direction do you see it taking in the future?

Wynn: Because technology education advances with the new types of technology that are created and used in society, our field has changed tremendously.

For example, students in our PLTW Courses can totally design an object using the computer and then fabricate it using a modeling machine. In the past, it took days to do what students can today do in minutes. Information technology has totally changed where the walls of learning take place.

We find most of our information beyond the walls of our school and constantly interact with teachers and students all over the world. Students are learning how to survive and contribute to the society in which they will be decision makers and workers. Sure it will be a different society, but we are doing everything that we can to help them be adapt, learn, work, and be successful in that society.